Mobilizing African Intellectuals Towards Quality Tertiary Education

5 - 6 July 2017 | Kigali, Rwanda

CONFERENCE REPORT

THE SUSTAINABLE DEVELOPMENT GOALS CENTER FOR AFRICA

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CONTENTS

I. **Introduction**

II. **High Level Opening**

Speeches and Keynote Address

Dr. Belay Begashaw, Director General, SDGC/A

Professor Jeffrey D. Sachs, Director, Sustainable Development Solutions Network

Dr. Abdalla Hamdok, Former Executive Secretary (a.i), United Nations Economic Commission for Africa (ECA)

His Excellency Paul Kagame, President of the Republic of Rwanda

III. **High Level Panel Discussion on Quality Tertiary Education in the Era of SDGs and Agenda 2063**

Introduction

Panel Discussion

Q&A and Resolutions

IV. **Parallel Thematic Group Discussions**

Session 1: The Enabling Environment in Education - Excellence in Teaching and Learning

Session 2: Research - Scholarly Works

Session 3: Building Reputable University Systems in Africa

Session 4: Knowledge for Development – Transforming Societies

V. **Findings of the Parallel Thematic Group Discussions**

Introduction: Professor Nelson Ijumba, Deputy Vice Chancellor of Academic Affairs and Research, University of Rwanda

Presentations

VI. **The Way Forward – Putting Words into Actions**

Introduction

Panel Discussion

Resolutions

VII. **Closing Ceremony**

Professor Labode Popoola, Vice Chancellor, Osun State University (Nigeria)

Professor Mabel O. Imbuga, Vice Chancellor, Jomo Kenyatta University (Kenya)

Dr. Mekasha Kassaye, Director, Office for Academic Standards and Quality Enhancement (OASQE), Addis Ababa University (Ethiopia)

Dr. Belay Begashaw, Director General, SDGC/A

S.E. M. Abdoulkadri Tijani Idrissa, Minister for Professional Teaching and Technology, Niger

S.E. M. Dr. Nabil Mohamed Ahmed, Minister for Higher Education and Research, Djibouti

Honorable Professor Kwesi Yankah, Minister of State, Tertiary Education, Ghana

Honorable Dr. Musafiri Papias Malimba, Minister of Education, Rwanda

VIII. **Annex I: Program**

I. INTRODUCTION

The Sustainable Development Goals Center for Africa (SDGC/A) conference entitled: *Mobilizing African Intellectuals Towards Quality Tertiary Education* was held at Radisson Blu Hotel & Convention Centre, Kigali from 5th to 6th July 2017. The conference created a coalition of African intellectuals that brainstormed and held principal discussions on practical actions, explore solutions and build consensual approaches on the major themes relevant to SDG implementation in tertiary education and research throughout Africa.

In its capacity as a platform for engaging academics, citizens and communities with the SDGs, the SDGC/A identified tertiary education as a "game changing" lever for African societies to meet the SDGs. Bringing together over 300 intellectuals and scholars from all over the continent and the diaspora, the conference convened major stakeholders for essential discussions on the major themes relevant to SDG implementation in tertiary education and research throughout Africa.

This includes discussions on comprehensively improving the tertiary education quality, independence and ownership of research outputs, universities' infrastructure, financing and cooperation, among other topics The participants included Heads of State, Government Ministries in charge of education, university leadership including Vice Chancellors and Rectors of public and private universities and Heads of Academic Affairs, and other representatives of African academic networks, councils and research centers.

BACKGROUND

No African institution of tertiary education appears in the top 100 podiums of recent international university rankings. Only 10 of the world's top 1000 universities are in Africa — 8 of which are located in a single country, South Africa. It is critical for the African continent to strengthen the quality of its higher education in order to compete on the global stage, as well as to meet the 2030 Agenda for Sustainable Development and the African Union's Agenda 2063 (AU2063).

To understand the stakes of tertiary education in Africa, one must take into account several important factors. First, the continent is vast and populated by 1.2 billion people — about 16% of the world population. Second, with 200 million inhabitants aged between 15 and 24 years of age, Africa is the youngest continent in the world. Third, it is estimated that Africa will reach 2.5 billion people by 2050 with half of the population under the age of 25. In the next five decades, there will be more young people in Africa than the youth in all the G20 countries including China, India and Brazil combined!

The challenge for Africa is to turn its demographic growth and youth bulge into real economic potential with a positive impact on development across the continent. However, despite the population numbers cited above, Africa's "Gross Enrollment Ratio" in tertiary education is only 9% compared to the world average of 33%.

Further, the youth in Africa who have graduated from many tertiary education institutions are often not sufficiently equipped for the labor market and are vulnerable for unemployment. In fact, youth account for 60% of all African unemployed, with women representing an even higher percentage. Even in the informal sector, where productivity and wages are desperately low, young people are in a situation of permanent underemployment.

Africa needs to devise and put in place a strategy to utilize its demographic transition and create a generation of productive and innovative entrepreneurs. As a result, the need for great improvements in the quality of higher education contributing to significant economic development requires immediate response.

Both the quality and quantity of tertiary education available should be addressed in order to reach a critical mass of human capital that will actively shape the knowledge-based society across Africa. Africa needs university graduates, who can accelerate and sustain the region's economic growth.

At the forefront of any reform, there is a need to secure the sufficient funding mechanisms but also to operate a change of mindset to reinstate the pivotal role of education practitioners as agents of change, complementing the efforts made by policy makers in that regard. Regional cooperation and integration is essential to foster the adequate governance that can nurture academic freedom, harmonization, ownership, and accountability of an efficient education pipeline in Africa.

Educators and students can equip themselves to perform at the highest of global standards while also raising the value of the African expertise with the support of global networks of higher educational institutions, leapfrogging through IT, sharing knowledge, incubating innovative solutions, advanced research and new business models. It is by strategically joining forces that the continent can achieve dynamic development with and for its promising youth. The overall objective is to reach a critical mass of human capital that will actively shape knowledge-based societies across Africa.

The SDGC/A firmly believes that education is the most vital input for every dimension of sustainable development: it should not only be considered as a public value but also as a fundamental human right. In light of these considerations, the SDGC/A decided to convene major stakeholders for discussions during this conference. This workshop is thought as a platform of engagement for the field actors who are exposed to Africa's higher education bottlenecks in their daily professional life. The SDGC/A foresees that the fruitful interaction among intellectuals can accelerate conclusive realizations on the ground, trigger emulation for implementation, and share successful practices among tertiary education establishments.

CONFERENCE OVERVIEW

The conference created a coalition of African intellectuals who convened in order to brainstorm on the key priority action on the following topics:

1. The Enabling Environment in Education – Excellence in Teaching and Learning

2. Research – Scholarly Works

3. Building Reputable University Systems in Africa

4. Knowledge for Development – Transforming Societies

Within each session, relevant stakeholders such as academics, intellectuals and policy makers will hold a fervent discussion in order to properly frame the challenges, learn from similar successful experiences in comparable environments and devise potential solutions to tackle the problem in an effective manner.

During the second day of the conference, in *The Finding of the Thematic Sessions*, the Chairs of each session will present the discussions' outcome, highlighting problems, best practices and debated solutions. This will be open to further questions and suggestions.

Following the first session, the Chairs of each session will deliberate with the panelists of The Way Forward Session, mainly Vice Chancellors representing all the regions of the continent, on how to make the previously reached solutions into operational actions and priorities that will identify concrete solutions to be tested by interested Universities across Africa, with the support of governments and key financing international institutions.

The conclusions and resolutions of the conference from participants of universities across Africa, Ministries of Education, members of the diaspora, and other development partners were adopted into the establishment of the Kigali Initiative: A call for accelerating the momentum towards quality tertiary education in Africa. This plan of actions and priorities examines the means in which the quality of tertiary education can be raised across the continent to achieve the UN Sustainable Development Goals and to promote the aims of Agenda 2063.

Overall, the ***Mobilizing African Intellectuals Towards Quality Tertiary Education*** conference reinstated the pivotal role of education practitioners as agents of change to galvanize innovative societies, complementing the efforts made by policy makers in that regard.

The SDGC/A trusts the expertise of African intellectuals in articulating pertinent action-oriented recommendations to the discrepancy between higher education and sustainable development, and in addressing daunting local and global realities.

Therefore, the SDGC/A is determined to foster the engagement of the African academic stakeholders as leading champions to implement in the SDGs in Africa and partake in the global transformation process.

Together with African intellectuals, the SDGC/A hopes to turn proclamations into action, aspirations into reality and convey the way forward towards positioning 25 African universities in the top 300 global university ranking by 2030.

II. HIGH LEVEL OPENING

Mobilizing African Intellectuals Towards
Quality Tertiary Education
5TH - 6TH JULY 2017
KIGALI CONVENTION CENTRE, KIGALI - RWANDA

THE SDGC/A CONFERENCE OPENING

The SDGC/A Conference plenary session was opened with introductory remarks by Dr. Belay Begashaw, Director-General, SDGC/A and Professor Jeffrey D. Sachs, Director, Sustainable Development Solutions Network (SDNS) and the Earth Institute.

The introduction addressed the objectives of the conference, the dynamics and key areas of discussion, as well as the necessity for African governments to view universities as absolutely focal entities for national success and the leadership role for development.

It was noted that education in the African landscape is lagging, as today they are only 7 African universities listed in the 500 global ranks. Moreover, it is imperative to strengthen the university system to meet the SDGs and AU2063.

The presenters examined the way in which Africa can contribute to global knowledge and called for the Vice Chancellors to be leaders of this exercise as part of the vibrant network of global universities, leading businesses, and research institutions (think tanks) that will be able to support the efforts of the reform of tertiary education in Africa.

Furthermore, the presenters indicated that the success of a country depends on the success of tertiary education and the conference is a great moment to accelerate progress. In conclusion, participants were encouraged to: Think big, be bold and be innovative!

The plenary session continued with opening addresses from Dr. Belay Begashaw, Director-General of SDGC/A; Professor Jeffrey D. Sachs, Director of the SDSN; Dr. Abdalla Hamdok, Former Executive Secretary (a.i) of the United Nations Economic Commission for Africa (ECA), and the keynote address by the guest of honor, His Excellency Paul Kagame, President of the Republic of Rwanda.

SPEECHES AND KEYNOTE ADDRESS

Opening Address by Dr. Belay Begashaw Director General, SDGC/A

It is my great honor to welcome you to this two-day conference on Mobilizing African Intellectuals Towards Quality Tertiary Education. The importance of education in any development effort cannot be over-emphasized.

It is everyone's wish, including those of us in Africa, to have quality education. Africa made significant strides in achieving the education goal during the MDG era, for example primary school enrollment moved from 65% in 1999 to 91% in 2015.

Some countries like Rwanda even reached 97%. However the focus of MDGs was more on quantity than quality, and in general the performance of the current education system in Africa is poor and very alarming. It requires urgent and well-articulated interventions to alleviate this crucial issue.

To this end, quality education in universities was raised as an urgent matter by African heads of state during the 4th SDGC/A board meeting of Addis earlier this year in January, and this conference is therefore organized as a follow on action to this call.

The world is forging ahead into a knowledge-based society, and the disparity in the quality of education between developed countries and Africa has the potential to turn into disaster!

This has already manifested itself by significant differences between the knowledge possessed by graduates of the high quality and low quality education systems ends of the world, and if this trend continues many African graduates won't be able to compete with their counterparts from other parts of the world. This is simply unacceptable!

Let us agree today that there should be no circumstances what so ever under which it is acceptable for quality education to be compromised – instead we must make it a fundamental characteristic of our education system.

The situation is particularly unfortunate because we know what our daughters and sons are capable of.

In almost every successful aspect of contemporary world, there is an African intellectual's footprint -- be in NASA or Silicon Valley – their critical contributions can be traced.

Why is this important for Africa to trace how her educated sons and daughters are performing in the developed world? There are estimated to be approximately 300,000 highly qualified Africans in the diaspora, of which 30,000 have PhDs.

As Africans, we are proud to see the contributions of our compatriots to the global good, but it is also painful to know that if this talent was harnessed for the good of Africa, our countries would be far ahead of where they currently are.

This huge number of African intellectuals seeking greener pastures in the global north is a reflection of the poor state of affairs in many African countries.

Not only are these intellectuals seeking better incomes and living conditions, they also get increased opportunities for their professional development.

Unfortunately, it is not about those who migrate abroad only – but there are a number of others, who are physically here in Africa but more aligned to serve overseas causes -- through short-term consultancies and other academic ventures -- with limited contribution to the local development of their countries and the African continent at large.

This magnitude of brain drain of Africa's intellectuals should be of great concern to all of us in Africa, including policy makers. Not only does this outflow of skilled personnel slow down technology transfer, it also creates dependence on foreign technical assistance and reduces the number of dynamic and innovative people.

As a direct consequence, Africa spends at least US$ 4 billion per year to employ some 100,000 western experts for "technical assistance."

In particular, African governments, businesses, and civil society need accurate data to help guide public and private investments. Researchers need to be able to supply needed data by applying existing global scientific and technical knowledge into local contexts.

In addition to the hard sciences, it is crucial to remember the role of universities in creating environments where important discoveries that contribute to the knowledge of mankind can happen, works of art can be created, and scholarly works written.

Africa has a proud history of this from Mali to Egypt to Ethiopia, and the world needs contributions from Africa's next generation. This point often gets lost as sciences are often focused on in development discussions. However, these works of art, scholarly works, and other discoveries are often what define cultures. How is that unimportant?

The SDG Center for Africa, which has a Pan-African mandate to support sustainable development, particularly the acceleration of the implementation of both the SDG 2030 and AU 2063 Agendas; has made it one of its priorities to emphasize to stakeholders that education and knowledge are indispensable ingredients in forging positive change in any society.

Given the impact that higher education has on the efficiency and quality of secondary and primary education, the Center has identified quality in higher education as a starting point.

It is extremely painful to note that in virtually all the reports from the various annual university performance rankings, less than 5 appear among the top 500 -- and out of these 2-3 are based in one country, South Africa! This clearly demonstrates the poor quality of the African education system and therefore, something has to be done -- now!

It is in consideration of this problem, that the

Center has organized this conference that has brought together African intellectuals from all over Africa and the diaspora to kick-start a discussion on practical actions that can be urgently undertaken to trigger the reform of the education system.

We are at a key point in our history where there is significant conviction from academics, politicians, average Africans, and donors to solve this issue. We have heard many leaders reflect concern about this issue, intellectuals recognize the issues well and are eager to help, and our friends and donors are happy to support our efforts.

Therefore, I must urge all of you not to take this moment for granted but instead act with a sense of urgency – because if momentum is lost it can take years to get back.

It is important to realize that any wrong decision or half-baked solution in the quest to improve the education system in Africa will have dire and lifelong negative impact for future generations.

For this reason, we gathered all of you here today to use your expertise to design well thought out programs to solve the previously mentioned issues.

It is our hope that solutions to some of the most pressing challenges will be sought and turned into operational actions by the end of the 2 day conference through presentations, panel and thematic group discussions; questions to be answered include;

- How to achieve excellence in teaching and learning?
- How can Africa contribute more to the global knowledge pool through research?
- How to build reputable university system in Africa?
- How will higher education drive desired economic growth and development?

There is no better group that can find solutions to these questions other than this one. This conference has brought together: Ministers of education, Vice chancellors, Deputy Vice Chancellors in charge of Academics, intellectuals from the diaspora and other key stakeholders in the higher education sector.

We brought you all here because we believe that intellectuals have a lot to learn from each other. This is true within and outside of Africa, and in this spirit, following the conference the Center intends to utilize its link with the SDSN and other allied networks of universities in addressing this critical issue of quality education in Africa.

African intellectuals have a lot to offer the world, and conversely there is a lot that Africa can learn from the rest of the world.

Before concluding, I want to quickly mention some specific outcomes that we hope to accomplish over the next two days:

1. Initiating a short-term project proposal that will be piloted for interested African Universities
2. Encourage African universities to join existing global university networks
3. Convey a platform for key tertiary education
4. Foster the engagement of African intellectuals into continental and global agendas in partnership with African policy makers.
5. Agree on mechanisms to closely monitor the conference follow up

At the end of the conference, the conclusions discussed will be compiled into an African Intellectual Charter that will articulate new solutions to be implemented in higher education institutions. This will articulate a longer term goal of having at least 25 universities in the world best 300 by the year 2030.

Thank you very much for your kind attention and wish all of you a fruitful conference.

Opening Address by Professor Jeffrey D. Sachs
Director of the SDSN

It really is a great occasion and I'd like to thank our MC for making very clear in the opening a very explicit goal, which is that at least 25 universities in Africa should be among the top 300 universities by 2030. This is something we can watch year by year if we watch the progress.

This is something we can aim for clearly and this is something that we can achieve. And what is important about this is that it is a very important goal for this region. It is also a competitive one – this is to join the top ranks of universities around the world.

The current situation is not satisfactory. The most used rankings in the world today are not necessarily fully accurate, but for example the QS World University Rankings or the Times Higher Education rankings, there are just a handful of African Universities. Even among the top 500, only 8 in the top 300 today and of those 4 are in South Africa and 4 are in Egypt and not one is in sub-Saharan Africa outside of South Africa. So this is a real challenge. And that is good for us and good for you as facing this challenge. Why does it matter? It matters because we know that Africa's economic development, its role in the world, its security in the world.

The well-being of what will soon be 2 billion people on the African continent depends on the vitality, on the dynamism, on the quality and on the leadership of its top knowledge, its scientific and technical expertise and its institutions of higher learning.

So this is a great challenge. But it is a challenge that can be met. And it's fitting that we are meeting in Kigali where this challenge is being met because Kigali before our eyes,in just a short period of time, is becoming a world hub of knowledge a place where major universities are gathering where new institutions are assembling and were we know that these objectives will be achieved.

Kigali is also showing the ability to attract partners from all over the world, and I was really delighted to learn that our MC is from Carnegie Mellon University Africa campus. This has special meaning for me for several reasons:

Carnegie Mellon is one the great universities in the United States and one of the world's greatest universities. But it is notable that it is a university in Pittsburg that was known as a heavy industrial town, a polluted city, not at the forefront technologically and now Pittsburg is one of the absolute cutting edge leaders in global technology. And for a very important reason, because of its universities and especially because of Carnegie Mellon University.

If you look to a university that is in the world cutting edge of artificial intelligence, machine learning and information communications technology, it is Carnegie Mellon University. Of course I have another special reason for being so happy, my daughter in-law is a Professor of Carnegie Mellon University and actually in Russian literature. So they combine the Humanities and the advancements in computer technology and this is what makes for great universities and great cities and great leadership.

In just a few minutes I want to say a few words about how this goal can be achieved. The first point I want to make is that you the Vice Chancellors need to be the leaders of this effort. So you would come from across Africa and we want these two days to be powerful brainstorming sessions, and then we want to go home and succeed. Not

to go home alone but to go home as part of a network. I was asked several years ago by the United Nations Secretary-General Ban Ki-Moon, and by our new Secretary-General António Guterres, to help create a vibrant network of global universities and "think tanks." And I want to make sure that the Sustainable Development Solutions Network is supporting you in your work. And you should feel absolutely not only encouraged, but also mandated to call on me and call on Dr. Begashaw to support you in this effort.

We want you to go home and talk to your governments and to convey at least our words of how important it is for governments to stand strongly with their universities as central to the success of economic development and the state of the development in your countries. We want Africans to put resources behind your universities, this is for sure. But we want you to convey the message that we will be mobilizing internationally every kind of support for you that we can. And we will be as creative together with you as we can in finding some support.

Let me say that in today's world universities are complex institutions with many kinds of networks that are important. And fostering those networks are vital for you. Traditionally perhaps your universities look to the Ministry of Education or the Ministry of Higher Education and your annual budget, carrying out your functions.

And that would be more or less the institutional arrangement. This will certainly not get us to where are aiming at which is continent filled with world leading and dynamic institutions. We need you to be empowered and empowering by your partners, international university partners for exchanges: for faculty exchanges, for student exchanges, for helping to build new curriculum that are up-to-date and cutting edge. We need you to be working together with leading businesses and I should emphasize by the way that the world's leading universities don't just frame business leaders, they depend on business leaders for their excellence.

Stanford University is sometimes said to have made Silicon Valley, but that is not quite true. Because Silicon Valley businesses also made Stanford University. Many of the faculty members of electrical engineering, in the first days of the new transistor age came from business to the departments of engineering in Stanford University, to University of California in San Francisco, Berkeley and the others.

So the businesses made the quality universities, not only the universities making the quality businesses. Africa has many important businesses. They have no right to stand aside from you and no sense to be apart from the universities; they need to be your partners. Africa, I'm happy to say, has more and more very wealthy individuals. Some successful business people. They need to be your philanthropists and benefactors. This is not the tradition for every university but I can tell you it is the tradition for every successful university.

Foster support – Universities are not financially self-standing anywhere in the world. They depend on gift, grants, philanthropy and on endowments. Make the links with your own alumni, some of them will have made money and be successful and will remember their Alma mater. This is also not necessarily the tradition. And for many universities, you are new – 10 years old, 5 years old. I can tell you since I have been at two universities in my career: Harvard University and Columbia University; they work non-stop keeping in touch with their alumni. Because the alumni supports universities financially and make it possible for them to have programs of excellence.

Attract students internationally. Don't be shy. Students from all over the world want to come to Africa, they want to come to know African societies, culture, ecology, ideas and business opportunities. Put your doors open and advertise, you will find students coming from around the world.

Also, I might add, paid students - because this is also part of the business proposition for universities.

You have a dynamic diaspora all over the world. African faculty throughout the United States, Europe, the Caribbean and Asia. Find ways to attract them, bring them home, part time or full time – this is exactly what has been a key to success in some of the most dynamic countries of the world. If you look at China, Korea, Singapore, Taiwan and other countries that have achieved startling growth over the years last 40 years, they have actively attracted their diasporas to come to

be leaders, to be teachers, and so forth.

We are going to hear from the United Nations Economic Commission for Africa (ECA) in just a moment. The UN is your partner in this, we are keenly interested in the success of this initiative. The Secretary-General of the UN António Guterres sends his special warm regards and he is very keenly supportive of this initiative and I will be with him Friday at the G20 to report on what I know will be a very successful gathering for all of us. So ladies and gentlemen, we are here to think big, to be bold, to be innovative.

Remember that the success of your countries, the success of Africa depends on the success of its leading institutions of higher learning and we are so grateful that the leaders of African higher education are here. I am thrilled with this conference and I want to personally commit to the full success that we will look at this conference as a great moment for accelerated progress and for your leadership in that.

Thank you very much.

Opening Address by Dr. Abdalla Hamdok
Former Executive Secretary (a.i) of the United Nations Economic Commission for Africa (ECA)

It is indeed an honor and a great pleasure to participate at this conference on *Mobilizing African Intellectuals Towards Quality Tertiary Education* organized by the SDG Center for Africa.

Allow me to sincerely thank the Government and People of Rwanda under the able leadership of H. E. President Paul Kagame, for their generosity, warm welcome and for hosting this conference. I also wish to thank the SDG Center for organizing this conference and for associating ECA with this timely and most relevant initiative.

I do not think any other theme is more important today for Africa than the one selected for this conference.

The theme for this conference responds very well to ECA's on-going structural transformation campaign for the continent to promote accelerated, sustained and inclusive growth and development as articulated in Agenda 2030, Agenda 2063 and other agreed continental and global development agenda. Since the turn of this Century, Africa made notable gains of growth and productivity underpinned by improved economic governance and steady though slow diversification.

Yet, as we all know, progress towards Africa's social development goals remains slow. In particular, unemployment, poverty and inequality must be addressed as a matter of priority if the Continent is to avoid reversals.

The Sustainable Development Goals adopted in October 2015 clearly underscore and emphasize the need to 'leave no one behind'. To achieve these objectives, Africa needs a new policy approach in order to influence the nature and pace of the development.Let me stress here the need for a leadership that provides a clear vision on tertiary education, its articulation within the overall development plan based on the broad mobilization of the different stakeholders in society including the private sector and local communities. I would argue that this vision would only be realized through a democratic developmental state that endeavor to strengthen state institutions capacity to undertake dynamic long-term planning.

Yet, the transformation of the state in many African countries into capable developmental states would require exceptional and demanding leadership capacity. Such leadership must be visionary, committed, transformational and entrepreneurial in order for development to take place.

Above all, leadership in the democratic developmental state must aim at defining an agenda that meet the needs of society, and put national interests above personal interests. To be effective, it is important to develop leadership capacity at all levels.Higher education and training are a vital component of the economic transformation process. Institutional infrastructure for higher education and training has been in place in Africa since the 1960s but it needs to be strengthened to meet the enormous demands of a modern, knowledge economy.

There is an unstoppable demand for access to tertiary education. Over the past four decades,

the average annual growth rate of enrolment in tertiary education is 8.4%, nearly double the global average of 4.3%. The number of tertiary students in Africa almost trebled between 1999 and 2012, from about 3.5 million students to more than 9.5 million. Despite the rapid growth, only 6% of the tertiary education age cohort was enrolled in tertiary institutions in 2008, compared to the global average of 26%, though there is significant variation among countries. And contrary to global trends, women remain disadvantaged in terms of access to tertiary education in Africa. The tertiary gross enrolment ratio (GER) for women is 4.8%, compared to 7.3% for men.

But at the same time, because of the 'youth bulge' many countries are struggling to create jobs for the increasing numbers of youth entering the job market each year. It is estimated that in the next 10 years, Africa will need to create 110 million 'new' jobs to absorb the current and future labor force.

It is now abundantly clear that Africa's current growth pattern does not create enough jobs. Fast growing African countries have high levels of youth unemployment, especially among the youth with secondary and university education, even though many countries face shortage of skilled workers.

To reverse this trend, African countries need to focus on modernizing their economies and developing an educated and a skilled workforce. Increased demand for secondary and tertiary education is encouraging, but only a first step. A lot more needs to be done to respond to the demands of a knowledge economy. Therefore, Africa must have well-equipped universities and institutions for tertiary education, and a committed pool of African intellectual human resource to provide solutions to the challenges facing the continent. High quality universities and technical education institutions provide a competitive advantage in the global economy.

We all know that, Africa's system for tertiary education faces numerous challenges in providing the necessary education, research and service needed for the continent to advance. I shall highlight four key challenges: There is a need for stronger emphasis on quality with growth in demand for tertiary education. As we observe, the increased demand for tertiary education has led to the mushrooming of private universities across Africa, though the model for private institutions differs from country to country, with many challenges.

The growth in private institutions has shifted the mandate of national governments towards building, supporting and monitoring the sector. They need to regulate private institutions with emphasis on features such as accreditation, qualification, and curriculum development so that they offer good quality education and qualification. Most African universities suffer from the effects of scarce financial resources. The current budget allocation average towards public higher institutions is less than 1% of GDP, and has not increased since 2010.

The legacy of colonialism has influenced both the design of the curriculum and the choice of subjects for study. For example, the curricula in agriculture, health, mining, and engineering are not attuned to the demands of the labor market. On average, 26% of the undergraduates in Africa other than North Africa, register in the arts and humanities, but only 4% in Science, Technology, Engineering and Medicine (STEM) subjects. Brain drain, or loss of skills through migration is very high in the continent: Since 1990, about 20,000 skilled professionals are estimated to leave Africa every year.

In Africa the tertiary educated account for less than 3% of the labor force, but more than 35% of all migrants. Highly educated workers are more likely to emigrate than less educated. The migration rates for tertiary-educated workers far exceed the migration rate for less educated workers. Nearly 15% of tertiary-educated workers migrate from Africa, the third highest rate after the Caribbean and Central America and Mexico. Inadequate remuneration packages, poverty, limited health services and poor working conditions, make it difficult for Africa to compete with richer countries that usually offer higher salaries, better working conditions and political stability.

In conclusion, I would like to propose some suggestions on how African intellectuals and universities can contribute to quality tertiary education: African intellectuals can provide a strategic direction to reforming African tertiary education to align it to a modern and transformative development path and create a critical mass of expertise in this area. Advocating a stronger emphasis on STEM subjects.

Much stronger national and regional institutions are needed to train future professionals with appropriate technical and functional skills, combined with leadership and management skills for a real transformation. A quality-quantity trade-off must make hard choices to either boost the capacity of existing institutions, or develop Centers of Excellence in various fields such as agriculture, health and Science, Technology, Engineering and Mathematics.

There is a need to develop suitable curricula, especially in STEM subjects that is oriented toward the needs of the labor market. In addition, non-cognitive skills such as leadership and management skills, IT, problem solving, and team work need to be developed and combined with the scientific skills in various sectors. For instance, Ethiopia has introduced the 70:30 principle for University enrolment between technical/engineering fields and social sciences so as to ensure a steady supply of technical skills necessary for economic transition.

The involvement of the African diaspora is vital for revamping Africa's tertiary institutions by harnessing their talents and skills and creating an enabling environment for these professionals to contribute to Africa's social and economic development. The youth potential represents both our greatest hope and our most vexing challenge. Our yardstick for success will be adequately measured by future generations if our words are weighted against our action to foster transformative and inclusive development.

This conference provides us the opportunity to do so and I would like to conclude by thanking the SDG Center for Africa once again for organizing this meeting.

I wish you very fruitful deliberations and thank you for your kind attention.

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KIGALI CONVENTION CENTRE, KIGALI - RWANDA

Keynote Address by His Excellency Paul Kagame President of the Republic of Rwanda

Before I start on my remarks let me say, first of all that when I was asked to be part of the Board of the SDG Center for which I was delighted to accept, before that I asked those who put the request to me that they consider, as they were suggesting to me to be the Chair of the SDGs Board Center to bring in a Co-Chair. And for the Co-chair I suggested that we get that person from the Private Sector, which was the same thing I did when I was asked to Chair the Broadband Commission.

But for this particular one, the reason was to emphasize the partnership between government and the private sector. But at the same time, coupled with that I fully understand and support as suggested by the earlier speakers that we must also have this triangular relationship and cooperation between the private sector, government and the academic institutions. So when you have the three working you have the highest chance to succeed in these endeavors.

Therefore I am pleased to join you today and let me once again welcome our guests to Rwanda and say that we are happy to host this vast expertise gathered here to discuss how Africa can build quality tertiary education and research.

Allow me to commend the SDG Center for Africa for leading the way in the search for innovative solutions to development challenges we face. As we have heard there has been much progress in the education sector in recent years including through the catalysts that was the MDG, in particular, access to education has greatly improved.

This is important to acknowledge because it shows that we can do it but it is not enough to support the ambitions we have for our continent.

More children are attending school but Africa needs many more graduates with knowledge and skills to grow and sustain our economies and shape the continents future. Africa's gross enrollment ratio in tertiary education is about a quarter of the world average as was stated to us earlier.

This is far from what is required to end poverty and instability, achieve prosperity or even sustain our dignity as human beings. Fortunately the right conditions are coming together to enable us to make the most of new ways to provide appropriate tertiary education.

First, education requires have an investment, and returns are long term and not immediate but there is no way around this. The role of government in setting education policies and as primary founder of education will continue and has to continue. However governments alone even with the right levels of financial allocation to the sector and the support of the government partners cannot sustain the momentum needed. We therefore have to find evermore innovate ways to attract needed resources from the private sector. This is especially because businesses have vested interest in the quality of graduates and skills they bring to the market.Modern technology including ICT present us with an unprecedented opportunities to overcome barriers to delivering information and skills to our populations. In particular affordable broadband will open up new pathways to world class education and vastly improve global collaboration on research.

The poor perception of technical education in many of our countries is starting to change, however more sustained effort are needed to give technical education its right value so that it contributes meaningfully to Africa's transformation agenda. As in other areas of development we have to continue to build on the gains made so far in gender equality. The critical mass of human capital that Africa needs will be reached much faster when both boys are girls can make equal use of opportunities afforded by education.

Finally our prospects for succeeding depend greatly on continued efforts to strengthen accountable governance and build robust national systems that are required to leverage international goodwill, expertise, and resources. This will also enable us to take better advantage of the increased availability of non-concessional funding. Africa has worked hard to stimulate the demand for education and expand access and young Africans are ready capable to learn so we must give them this opportunity.

Our responsibility now is to work together to create the right conditions for delivering the 21st century education that everyone deserves, in order that we may all benefit from their talents.

I wish to end here and thank you for your kind attention.

III. HIGH LEVEL PANEL DISCUSSION ON QUALITY TERTIARY EDUCATION IN THE ERA OF SDGs AND AGENDA 2063

The SDGC/A Conference plenary session continued with the High Level Panel Discussion on Quality Tertiary Education in the Era of SDGs and Agenda 2063, moderated by Mr. Bonney Tunya, CNBC Africa Presenter. The panelists include: Honorable Dr. Musafiri Papias Malimba, Minister of Education for Rwanda; Dr. Abdalla Hamdok, Former Executive Secretary (a.i) of the United Nations Economic Commission for Africa (ECA); Professor Jeffrey D. Sachs, Director of SDSN; Dr. Fred Swaniker, Chief Executive Officer and Founder of African Leadership Academy and the African Leadership Network; Dr Max Price, Vice Chancellor of the University of Cape Town and Mr. Hiroshi Kato, Senior Vice President of JICA.

Mobilizing African Intellectuals Towards
Quality Tertiary Education
5TH - 6TH JULY 2017
KIGALI CONVENTION CENTRE, KIGALI - RWANDA

INTRODUCTION

The panel discussion was a comprehensive and deep assessment of the Concept Note: *Mobilizing African Intellectuals Towards Quality Tertiary Education*; in addition to the implications of continuing the existing state of affairs regarding the quality of primary, secondary and tertiary education in Africa. The discus¬sion examines tertiary education as the "game changer" lever towards African innovation and the challenge for Africa is to turn its demographic transition into real economic potential with a positive impact on develop¬ment across the continent.

Overarching questions: Can we identify the best practices needed to be deployed in order to bridge the knowledge gap? How to tap into the momentum provided by global commitments and catalyze change, leapfrog, and reshuffle of the tertiary education system towards critical learning and solid green industrialization path?

PANEL DISCUSSION

1. University Ranking

Opening the discussion, Dr. Max Price indicated that when observing the various university ranking systems it is evident that the data ranking is subjective, as the quality of a university can be improved without moving up in the ranking board. It was encouraged that a different system of quality assessment should be explored, such as those that are used in the hotel star ranking system.

This comes as a response to avoid the drawbacks of the current university global ranking systems that tends to favor either well-established or well-endowed institutions. The new system would make room for new and emerging universities as well as consider impact as a key indicator for quality. Such a system would permit a more refined appraisal for African universities.

A method to improve the quality of tertiary education was suggested through the creation of a Global Fund for African Education to support all universities; renewed commitments by government; recognizing the cost of typical university to get to the top standards for global competitive services. Overall it was agreed that governments need to understand that funding for the universities needs to be two or three times more than average in order to improve the quality of tertiary institutions and critical research concentrations need to be development.

Dr. Fred Swaniker agreed with the sentiments of Dr. Price and indicated that too often Africa seeks validation from the West. It was argued that new models should be created with new types of universities in order to create a unique list of the top African universities.

With regard to ranking, it was noted that many rankings are based on inputs (number of PhD candidates, computers, etc.) and yet it is clear that Africa is running out of time. It is essential to find different vehicles to get there such as: jobs, entrepreneurs and innovation. These parameters should be added within Africa's ranking criteria.

2. African Based Institutions and Centers of Excellence

Honorable Dr. Musafiri Papias Malimba highlighted the importance of having institutions come to Africa instead of Africans travelling abroad for higher education. Citing examples such as Carnegie Mellon University of Africa that is located in Rwanda with the Head Campus in the United States and other institutions such as the African Institute for Mathematical Sciences (AIMS) which has a campus in Rwanda but is a Pan African Network of Centers of Excellence. It is noted that this is how Africa is contributing with political will and investment, along with a long term vision of knowledge.

3. Underemployment

Observing the issue of underemployment, Mr. Hiroshi Kato indicated that the employability of graduate youth is the issue in the case of African tertiary education. It was noted that the universities should be more practical and solution oriented and therefore more engineering. Mr. Kato highlighted the advancement of tertiary institutions with the generous assistance from the Government of Japan in the case of Jomo Kenyatta University of Agriculture and Technology (JKUAT) based in Kenya, as well as the Egypt-Japan University of Science and Technology (EJUST) as the institutions are changing the way in which university education is provided.

Furthermore, Dr. Price indicated that Africa needs to understand the causes of deficiency in order to better address them. These include issues such as curriculum, job market mismatch and ensuring that non Science, technology, engineering and mathematics (STEM) graduates are able to be employed. In addition, it is essential to recognize that graduates will get 4-5 jobs in their lifetime whilst they only get the chance to complete a full-time university degree once in their lifetime.

4. Financing Tertiary Education

Professor Jeffrey D. Sachs indicated that is essential to note that most African universities suffer from the effects of scarce financial resources. However, it was advised that low cost education is a reality and it should be explored. This is possible through methods such as access to free publications – for example Columbia University online library provides collection of digital archive of various materials stored as electronic media formats. These features are possible for Africa.

Dr. Fred Swaniker highlighted innovative models, such as Princeton University's analysis of academic calendars. It is apparent that Africa cannot afford 6-month long holidays in the academic calendar, therefore we need to observe different models to reach quality education. It is necessary to concentrate the classrooms so that institutions are able to save on space and the number of students among other issues. Observing the resources, one must observe government, family, private sector and banks, as well as philanthropy. The answer is that finance company systems need to be development that allow the students to repay by sharing their income for 10 years.

5. Research and Development

In the case of research and development (R&D), Dr. Abdalla Hamdok stated that upgrading and building capacities of tertiary institutions is partly due to R&D as this is key and important for African universities to fund. Furthermore, there are many innovative ways to finance; however it is essential to get the allocation of resources to education as the priority. Dr. Price indicates that the trends of research are going into development – it is necessary to observe cross cutting disciplines. Therefore, Africa should prioritize institutions rather than specialties. Research funds should be established, such as the EU and others, where companies can put money into them and build some concentration.

6. Teaching and Learning

High quality universities and technical education institutions provide a competitive advantage in the global economy. Honorable Dr. Musafiri Papias Malimba stated that in order to attract young adults, universities need to harness the power of IT. There needs to be an arrangement of problems, projects and products for students to work on which is a better way of learning in both sciences and social sciences. Technical Vocational Education and Training (TVET) is also key too because in the case of one doctor, 10 assistants are needed with one engineer and 70 support technicians. Flexible curriculum and increased value of entrepreneurship are also necessary in order to answer the issue of failure rates.

7. Demographic Dividend

In the case of Africa, Dr. Sachs indicates that universal secondary completion should be included in the success of quality tertiary education and reducing fertility rates. The recent data is also important and matters in this effort.

Q&A AND RESOLUTIONS

Question: Reform also requires the revolution of minds! Who will lead that revolution?

Dr. Price: Quality is not only budget but also example to switch from quantity to quality. The impact should be a better indicator for quality than quantity.

Dr. Swaniker: We can either wait for the youth to make the revolution or we can revolutionize our system to make our youth successful. Peer review in rankings do not allow innovation to happen if they are not open-minded enough. Rwanda and Mauritius are good examples of countries that are open to new models of education. Other African countries will follow suite. Africa managed to leapfrog with mobile phone, we need to seize the same opportunity with higher education.

Honorable Dr. Musafiri Papias Malimba: Let us set a Research and Innovation Fund aligned with the research agenda of the country.

Professor Sachs: African Education Fund for completion of primary and secondary education is necessary. It is not about the labor markets but more about what the society needs. Do not try the increase the number of publications into US journals who don't care about African priorities! You should be publishing in journal focusing on your topics such as African journals, which are relevant for you.

Dr. Hamdok: Education is and should be the prime priority. Let us have economies of scale for university and encourage integration with the African Diaspora.

Dr. Swaniker: It is essential to note that it took Japan 100 years – Singapore 60 years - China 30 years – Rwanda 20 years to develop. Create the University of the Future not only for Africa but for the world.

IV. PARALLEL THEMATIC GROUP DISCUSSIONS

SESSION 1: The Enabling Environment in Education - Excellence in Teaching and Learning

The Thematic Group Session 1 was chaired by Professor Abel Idowu Olayinka, Vice-Chancellor of University of Ibadan in Nigeria, with the presenter Professor Mabel Opanda Imbuga, Vice Chancellor, Jomo Kenyatta University of Agriculture And Technology in Kenya.

INTRODUCTION

This session looked into quality of tertiary education with a comprehensive approach that examines educational tools and environment that impact tertiary education. Discussions presented involved policies that impact teachers and students as primary beneficiaries, highlighting training and award programs that improve the quality and relevance of education. Improving capacities of institutions through technology was a major aspect of the discussion as a critical aspect of policies that support relevance and accessibility to students, irrespective of their social and economic status.

KEY CHALLENGES AND SOLUTIONS

Given the complexity of challenges identified in this session, some of the solutions were in direct alignment with specific issues while others took a comprehensive approach. Some of the major impediments in tertiary education were identified as, irrelevancy of teaching tools, methods and content that foster knowledge retention and ensure employability. The introduction of technology into classrooms, the presence of training and evaluative programs that serve as continuous professional development tools, were suggested as part of an institutional strengthening process of quality assurance. Furthermore, the necessity for university degrees to have an entrepreneurial angle has been proposed as a solution for increasing graduate employability. Difficulties students have in transferring credits between programs, university systems and the lack of choice students experience in program selection were also mentioned. Partnership amongst tertiary institutions was suggested as a vital approach in establishing a systemic knowledge management platform that addresses the lack of collaboration amongst universities. Lastly, better incentives for students with low economic backgrounds and the promotion of women role models, both as students and as teachers in the tertiary system, was recommended as a critical step towards addressing gender equity and specifically the lack of familial academic and career oriented support girls and first generation students lack.

Q&A

Q: In reference to laptops and tractors assembled by students and sold at Jomo Kenyatta University: can other African universities support these two initiatives through contracts or MOUs?

A: Partnerships are important when aligning potential capacity with funding that can bring ideas to fruition. The University of Jomo Kenyatta is looking for partnerships and is willing to sign MOUs to scale up these projects.

Q: How can we raise the bar for the standard of teaching at African universities whereby their effectiveness and quality of knowledge transfer is continually upgraded and reviewed? How can we make African universities more competitive in meagerly funded areas such as research?

A: Pedagogical training is not always made available to teachers, especially in universities that don't have the funds to provide it. Delivering higher standards of teaching depends on the continuous professional development courses and trainings made available. Students are now able to make a difference in evaluating their professors online. This is an assessment that is taken into consideration when promoting teachers.

Q: African universities are struggling to transfer research findings into technologies and commercialized ideas. How do we address this issue?

A: Since universities are not experts in marketing and commercializing products, they need to play a stronger role in linking with the private sector industry to negotiate how research findings or products can become patented and commercialized.

Q: How can we support more female participation in science? Would introducing an all women science institution have a positive outcome?

A: Providing incentives that support women to go further into higher education and financially or otherwise alleviate the responsibilities they are expected to live up to is one way to provide support. Separating the learning environment of men and women is only going to minimize the diversity of the issues women and men can learn from.

CONCLUSION

The session addressed issues that were overarching within the tertiary system and provided solutions that would serve as fundamental changes that future enhancements can be built on. In conclusion, proclamations were made that implementation of the suggested solutions will serve as the measurement of development in education and in overall country level growth.

SESSION 2: Research – Scholarly Works

The Thematic Group Session 2 was chaired by Professor Christian Happi, Department of Biological Sciences and Director of the African Center of Excellence for Genomics of Infectious Disease (ACEGID) of Redeemer's University in Nigeria. The presenter of the session was Professor Elias Ayuk, Director of the United Nations University Institute for Natural Resources in Africa (UNU-IRA) in Ghana.

INTRODUCTION

The focus of this session was on the challenges faced by African universities in developing and maintaining quality research and innovation. Fueling knowledge-based societies in Africa can be game-changer for sustainable development of the continent. But as of today, Africa R&D and innovation produces just 2% of the world's research output, including only 0.1% of the world patents. To improve R&D and innovation, amounts invested in people and research infrastructure must be increased, as per the STISA-2024 recommendation to allocate at least 1% of GDP to R&D. There is also a need to connect research establishments with enabling institutions and policy makers. What should Africa do to improve the state of research so as to position itself as an influential contributor to global knowledge?

KEY CHALLENGES AND SOLUTIONS

After the presentations made by Prof. Happi, ACEGID, on "Developing and sustaining high quality impactful research and innovations in African universities: challenges and opportunities" and Prof. Ayuk, UNU-INRA, on "Strengthening research-policy nexus at research and academic institutions in Africa: challenges and opportunities", key challenges raised were by the audience. They highlighted the un-ability of African academia to tackle local challenges, the scarce brain circulation, the lack of incentives for quality impactful research and innovation, data requirements, funding constraints, the anti-intellectual attitude, the increasing number of students, the "predatory journals" and conferences, the lack of genuinely motivated joint research, etc. Obstacles to quality research are numerous but the second part of the session focused on practical proposals to address them.

Some best practices were shared, such as the work of the African Center of Excellence for Genomics of Infections Disease (ACEGID) and its role during the Ebola outbreak; the Ghana Climate Innovation Center that is assisting SMEs with seed funding and training; the United Nations University international network,

including UNU-WIDER and UNU-INRA; the Lagos State Research and Innovation Council that is to vote budget contribution; the Dakar City of Knowledge about to be inaugurated as a biotech research platform; the Africa Journal Index currently developed by Thompson & Reuters; the University of Rwanda digital repository for scholarly works (dr.ur.ac.rw).

These success stories inspired the formulation of bold solutions to improve the research capabilities and research capacity of African higher education establishments. Among others:

- Enact laws allowing African researchers to freely move across the continent and transnational recognition of degrees;
- Co-create and co-produce knowledge by researchers and policy makers to enhance the development of policies relevant to the SDGs implementation;
- Harmonize the authoring system among students, lecturers and professors;
- Map the continental expertise and catalog all the Centers of Excellence to help foster the exchanges, build stronger networks, strengthen mobility, channel finance, reinforce collaboration;
- Institutionalize valorization of research and transfer of technology and create more platforms showcasing the results of research;
- Start the innovation fund for the continent or a Global Fund for African Education to support universities;
- Train researchers to vulgarize their findings towards policy-makers and general public;
- Create corridors of poles of excellences to jointly work on common issues.

CONCLUSION

In conclusion, the matter of mindset was also touched upon through the scope of decolonizing African universities to be able to collaborate as equal, increase the confidence to publish and get the deserved IP attached to it. There is a necessity to be creative and innovative to address local issues while answering global challenges as well. A consensus was reached toward the urgent implementation of previous pan-African visions and plans, such as the Lagos Plan of Action. To summarize, it was decided to “be nerd and think” to spur action!

SESSION 3: Building Reputable University Systems in Africa

The Thematic Group Session 3 was chaired by Dr. Fred Swaniker, Chief Executive Officer and Founder of the African Leadership Academy and the African Leadership Network (South Africa); with the presenter Professor Patrick Paul Walsh, Professor of International Development Studies of University College Dublin (Ireland).

INTRODUCTION

This session focused on the necessity for African universities to be considered as international institutions that attract students and scholars from all over the world. The session addressed the importance of the university systems in building a strong reputation in an increasingly competitive global space, the development of multicultural communities of students and staff, preparing the students for global political and social environments; as well as the development of international alliances in research, education and business.

KEY CHALLENGES

Among presenters and participant the discussion took place around what type of regulation needs to happen to leap frog university quality education in the continent to top global standards. The key challenges identified by the participants in the discussion group were mainly associated with quality, access, funding, among others. Regarding quality, university systems in the continent, aside from few exceptions, do not meet international standards and do not attract top end faculty or students. Participants argued that accreditation systems are not properly enforced or aligned to assure quality. Moreover, they pointed out that national exam mechanisms are weak and do not foster competition. Access is another main issue identified, as tertiary education enrolment in the continent is only 7%, the problem goes further if equality and gender is analyzed, as this 7% benefits wealthier students and more men graduate from tertiary education than women.

Participants agreed that there is a mindset problem as well, that African values are undermined and solution are only searched abroad, disregarding local context. Additionally, one of the main issues that was discussed was the incapability of the university systems to match the skills that are taught that the skills that are demanded by the market, leading to substantial percentage of graduates with no prospect of employment.

The concern of restricted funding that results in low faculty quality, inadequate infrastructure, basic syllabus, poor student life in campus, low critical mass of researchers in diverse scientific disciplines, among others were raised by the group. Finally, the idea of thinking differently was well discussed, of reevaluating if Africa needs to copy European and American university model, acknowledging that the continent needs to meet global standards in a different pace given the demographic pressure of having the youngest human capital share in the world.

After this, methods, best practices and disruptive models were described after the key challenges were classified, followed by the formulation of possible and tangible solutions. The best practices highlighted by the participants include: strategic matching between students' learnt skills and what the industry and labor market is currently demanding, such as incorporating internships and capstones in career curriculums; partnering with government to supply expert consultancy services from students and alumni in exchange of funding; increasing government expenditure in R&D (e.g. South Korea 4: 36%, Israel 3: 93 % of GDP).

SOLUTIONS AND CONCLUSION

To address the challenges discussed, the participants indicated that to deal with students financial constraints and access problems an Education Bank or Rotary Fund can be established, that lends money to students at low or zero rates, partnering in a risk sharing structure, creating the incentives for it to originate the funding for the student loans, to follow up on lagged borrowers and help to assure the financial performance of the facility.

Furthermore, to reduce tertiary education cost, "de-bundling" services was proposed as a solution, universities offer too many services in "one package": knowledge generation, applied knowledge to societies, certification, validation, etc.; hence, specializing on particular services and cost them differently, will improve the quality of each service and reduce costs as students will be able to pick among them separately.

In order to improve quality of students, national, regional and continental regulation to improve student selection/admission and accreditation was suggested, by creating a body that credits institutions with a national exam mechanism that links the examination with industry's demanded skills.

Additionally, the importance of branding African tertiary institutions properly was raised, attracting students from the continent and from abroad, ensuring their global prestige by providing graduates that solve real world problems and creating a curriculum that address market's needs.

Observing issues of funding, on the cost side the solutions include: more efficient spending and re-sizing administrative cost. On the financing side, a cross-subsidy fee system was suggested by Cape Town University VC, explaining that if the top 20% of the student body can afford higher fees, these fees can be kept and used for subsidizing those that can't afford high private university fees. In order to increase private sector involvement, it was proposed that an incentive mechanism needs to be built, linking the benefits of having well trained and knowledgeable students with top end education, that can directly favored private sector´s productivity, with the financial support to education institutions. Finally, a proposal for the creation of a foundation was received and discussed, by former VC of University of Dakar, The African Foundation for Research, Innovation and Mobility (AFRIM) aims to promotes quality research in African universities, fostering the investment of a proportion (2-5%) of national income from natural resources in science.

SESSION 4: Knowledge for Development – Transforming Societies

The Thematic Group Session 4 was chaired by Professor Diran Makinde, Senior Advisor, NEPAD Industrialization, Science, Technology and Innovation Hub (NISTIH) (South Africa); with the presenter Professor Labode Popoola, Vice Chancellor of Osun State University in Nigeria.

INTRODUCTION

The focus of this session was the responsibility of universities and other institutions to disseminate knowledge to a society. This key role of universities has been overlooked in the past, and therefore there tends to be a disconnect between universities and the society, at large. Academics and their institutions are therefore often accused of being in an "ivory tower" while not helping to relieve issues that normal citizens face. This session looked at specific challenges surrounding this issue, best practices and solutions for addressing this.

KEY CHALLENGES AND SOLUTIONS

Key challenges raised were that academics are often unaware of problems in their societies (possibly because they rarely communicate with those outside of academia), student quality is poor coming from secondary school, universities are based on a Western model which doesn't necessarily work for Africa, and resources are very limited. All of this together produces students that are not well matched with the needs of the job market or the society.

A couple best practices were to partner with Asian Tiger countries that have recently developed to learn lessons from them, and to actively encourage entrepreneurial activities of students during and after studies are completed. For change to occur, a change in ethos and mindset towards true partnerships with government, businesses, and society was identified as a crucial starting point. This will also involve going into the society more and learning about the issues that academics can solve. An increase in spending on higher education was also identified as something that has made other countries (particularly Asian Tiger countries) successful in their development and should be emulated by African countries. To this end, it was recommended to implement an agreement that specified using 1% of GDP on education. Regional

CONCLUSION

In conclusion, this is a complex issue that unfortunately has been developing over a long period. The good news is that there is a clear idea of what the problem is and how to alleviate it. To achieve it, academics must be willing to step out into the world and figure out real problems that people face, and countries must realize the value that universities give their societies by increasing their funding. Partnerships will facilitate and accelerate this effort.

V. FINDINGS OF THE PARALLEL THEMATIC GROUP DISCUSSIONS

Mobilizing African Intellectuals Towards
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On the second day of the SDGC/A Conference, the plenary session began with an introduction to the introduction by Professor Nelson Ijumba, Deputy Vice Chancellor of Academic Affairs and Research of the University of Rwanda. This introduction included an overview of the sessions conducted the day before and the state of tertiary education in Africa. This was followed by presentations by each of the session chairs on the findings of each session to the conference participants.

This session began with an summary of the first day of the conference, including the observations, reflections and findings. Professor Nelson Ijumba recognized that the opening ceremony on the first day informed participants that there is a general consensus that higher education should and can be a game changer in order to ensure successful delivery on the SDGs in Africa.

INTRODUCTION

by Professor Nelson Ijumba
Deputy Vice Chancellor of Academic Affairs and Research, University of Rwanda

This session began with an summary of the first day of the conference, including the observations, reflections and findings. Professor Nelson Ijumba recognized that the opening ceremony on the first day informed participants that there is a general consensus that higher education should and can be a game changer in order to ensure successful delivery on the SDGs in Africa.

It is evident that the potential exists for African Universities to make a difference and have an impact, as there have been success stories in which African scientists and institutions have achieved global impact. The sessions throughout the day highlighted the need for a paradigm shift in thinking, and revolution in action in order for things to be done differently.

Regarding the challenges addressed during the sessions, it was noted that low participation in the global knowledge economy was based on many indicators. This includes low participation in Science, technology, engineering and mathematics (STEM) areas, especially based on many indicators; human resources capacity which include finding solutions to the brain drain and reparations by countries gaining from the brain drain. In the area of funding it was noted that student funding, sector funding and the involvement of the private sector all need to be address.

The poor quality in learning and teaching has an effect on the graduates as they are not ready when leaving their courses and thus have low employability. Furthermore, the disjuncture between academia and industry was addressed with the low research productivity; the lack of relevant and impactful research outputs and low innovation. Another challenge was the ranking or rating system for universities, as in the global and regional outlook it was noted that it is more important to benchmark against the best in order to have true quality enhancement, In addition, there is a lack of appropriate infrastructure and governance, which includes the appropriate policies to support the implementation of the higher education initiatives in research, innovation, learning and teaching.

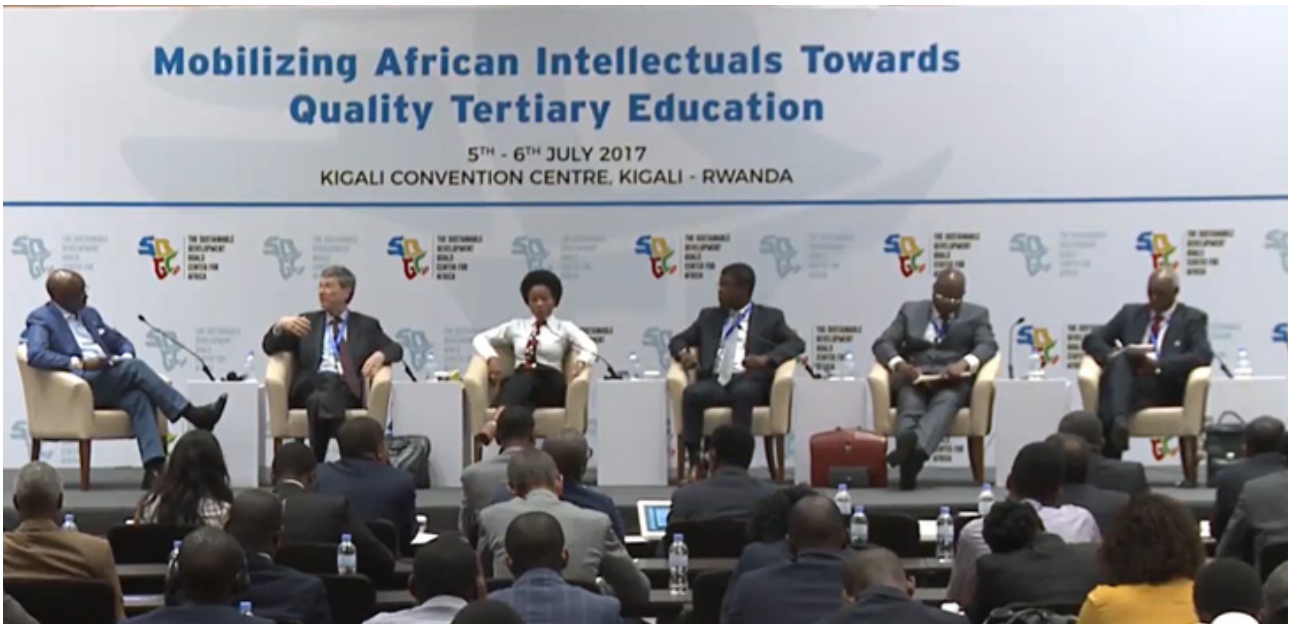
The way forward was also addressed through the discussions on the first day of the conference, such as the promotion of increased participation in STEM especially for female participation as this has an impact on enabling government policies. In regards to funding, solutions were given such as an increased share of national budgets, private sector involvement, new student funding models, and a triple helix within research and innovation support. In addition, it was highlighted that a revolution in teaching and learning is necessary as in the area of ICT there is a need to widen and ease access; create an effective use of space and other facilities and improve broadband investment. With regard to curriculum review, new ways of teaching can be adopted, as well as ensuring effective use of time and fit for purpose graduates that are high in soft skills, entrepreneurship and innovation thinking. As for partnerships and networking, universities were recommended to engage with Centers of Excellence, differentiate funding, recognise economies of scale and ensure to engage in capacity building.

Observing the higher education imperatives, Professor Ijumba highlighted the local relevance and global impact that universities need to have in order to become premiere tertiary education institutions in Africa. In addition, there is an apparent need to strive to address the needs of society and not to meet the demands of the labour market.

Some observations and lessons from the welcoming dinner on the first night of the conference, include the cultural dance troupe Inganzo Ngari that displayed a combination of energy, harmony, synchronization – which are key methods that should be used in the way forward for the conference:

Let us have energy and vigour in the implementation of the resolutions, and work in coordination with harmony and synchronisation, to pull in the same direction towards achieving our common goals and objectives.

VI. THE WAY FORWARD PUTTING WORDS INTO ACTIONS


Mobilizing African Intellectuals Towards
Quality Tertiary Education
5TH - 6TH JULY 2017
KIGALI CONVENTION CENTRE, KIGALI - RWANDA

The SDGC/A Conference plenary session concluded with a panel discussion on The Way Forward - Putting Words into Actions, chaired by Dr. Donald Kaberuka, Leadership Council Member, Center for Public Leadership of Harvard Kennedy School. The panelists included Professor Jeffrey D. Sachs, Director of the SDSN; Professor Mamokgethi Phakeng, Deputy Vice-Chancellor for Research and Internationalization of the University of Cape Town; Mr. Thierry Zomahoun, President and Chief Executive Officer of the African Institute for Mathematical Sciences (AIMS); Professor Abel Idowu Olayinka, Vice Chancellor of the University of Ibadan and Professor Alexandre Lyambabaje, Executive Secretary of the Inter-University Council for East Africa.

INTRODUCTION

The Way Forward Session was a culmination of a two-day discussion that detailed challenges and solutions in quality within Africa's tertiary educational institutes. The panel was represented by distinguished academics from Africa and beyond who shared varying thoughts on the development framework Africa must adopt, so as to leapfrog into a competitive platform that uniquely presents solutions for the African context.

Overarching questions: What are the practical actions that should be urgently conducted? How to operationalize the implementation of those game-changer actions in volunteering higher education establishments across Africa?

KEY IDEAS AND SOLUTIONS

The road map for improving quality in Africa's tertiary institutes will depend on local and global coordinated efforts and further empowerment of existing regional and continental university associations and interuniversity councils that ensure quality. Long term plans for African Universities should include decolonization of the system and if possible the reinvention of it, in-order for Africans to become the best of their own version. This should be carried out through a globally standardized framework that represents the African identity and the multifaceted opportunities they can leap into through mechanisms such as the training of a critical mass of problem solvers for African challenges. The panel has noted the need for global ranking methods to have an innovative approach to the African context; whereby, the unique values and context of African universities are recognized. It was also stated that the sustainable functionality of African education will depend on affordability and accessibility to students with various economical backgrounds who should be trained for today's and futuristic African challenges.

Historically, one of the financially, and/or otherwise, destabilizing factors for public African universities has been political instability, which beckons the increased need for bridges to be gapped between academia and the private sector as well as with members of civil society. Meeting the SDGs will require a multi-sector approach that hones in on building technologically supported African knowledge ecosystems backed by a strong research infrastructure. While preparing the future, African tertiary institutions should consider that, where Africa lacks in best practices, there is much to learn from interesting and innovative practices taking place both within and outside of the continent.

CONCLUSION

Challenges in delivering effective quality tertiary education is not only present in Africa, it's a global confrontation. Given Africa's colonial past, the challenges are intricately unique and preparing students for jobs of the future will require reflective mindsets that can build content and curriculum to contextually transform African students. Through this massive undertaking, tertiary education needs to open doors to investors and collaborators that can strengthen and scale-up innovative ideas that serve as engines of development. Africa will move ahead effectively when our vast resource in the number of youth becomes utilized through training programs that pave the way for them, as agents of change, to add value to Africa's major resource – natural resources.

VII. CLOSING CEREMONY

The closing session of the SDGC/A Conference included closing statements from representatives of universities in Africa: Professor Labode Popoola, Vice Chancellor, Osun State University (Nigeria); Professor Mabel O. Imbuga, Vice Chancellor, Jomo Kenyatta University (Kenya); Dr. Mekasha Kassaye, Director, Office for Academic Standards and Quality Enhancement (OASQE), Addis Ababa University (Ethiopia). The summary of conference proceedings and presentation of the Kigali Initiative was presented by Dr. Belay Begashaw, Director General of SDGC/A. In addition, closing statements were given from Ministers of Education in Africa: S.E. M. Abdoulkadri Tijani Idrissa, Minister for Professional Teaching and Technology for Niger; S.E. M. Dr. Nabil Mohamed Ahmed, Minister for Higher Education and Research for Djibouti and Honorable Professor Kwesi Yankah, Minister of State, Tertiary Education, Ghana. The session concluded with the closing remarks by Honorable Dr. Musafiri Papias Malimba, Minister of Education for Rwanda.

Summary of Conference Proceedings and Presentation of the Kigali Initiative

by Dr. Belay Begashaw

Director General, SDGC/A

Kigali Initiative
To Mobilize African Intellectuals
Towards Quality Tertiary Education

The participants from universities across Africa, Ministries of Education, members of the diaspora, and other development partners met in Kigali, Rwanda from 5th to 6th July, 2017 to discuss the state of tertiary education across Africa, and to consider a plan of action to raise the quality of tertiary education across the continent to achieve the UN Sustainable Development Goals and to promote the aims of Agenda 2063.

Noting SDG 4, to "Ensure inclusive and quality education for all and promote lifelong learning" and recognizing that none of the other SDGs will be successful without a robust tertiary education system throughout Africa;

Recognizing the critical role of the institutions of tertiary education to provide every nation with trained leaders, entrepreneurs, technical experts, policy research, policy expertise, and educators for the next generation;

Recognizing the key role that intellectuals of all types – scientists, engineers, social scientists, researchers, university professors, and others -- have to play in Africa's development, as thought leaders, researchers, teachers, and advocates for evidence-based approaches to sustainable development;

Understanding that African universities today are in a poor and under-resourced state as evidenced by their chronic budget crises, inadequate infrastructure, and low global rankings according to multiple systems of evaluation;

Recognizing that new information and communications technologies (ICTs) and other breakthroughs make possible new high-quality, low-cost models of quality tertiary education;

Recognizing the large number of new actors, including international academic partners, non-governmental organizations, national and international foundations, and innovative private-sector initiatives to offer high-quality tertiary education;

Recognizing that by 2050 Africa will have around 400 million university-aged young people (ages 20-29), roughly double of the number today;

Acknowledging the urgency to raise the quality of Africa's tertiary education, and that we must seize the opportunity given the interest of politicians, academics, international partners, and Africans everywhere.

We agree on the following actions and priorities:

1. **Mobilize African leaders and African society to invest strongly and consistently in the upgrading of Africa's tertiary education, with the goal to create a high-level of performance throughout Africa by 2030;**
2. **Aim to achieve at least 25 African universities within the top 300 universities worldwide by 2030 based on international rankings and evaluations that are relevant for Africa's needs;**
3. **Foster the leadership of Africa's universities toward the achievement of the SDGs and Agenda 2063, through revised curricula, degree programs, executive training, research, entrepreneurship, and policy advising;**
4. **Create a network of Vice Chancellors of African universities to promote the Kigali Initiative, with a secretariat at the SDG Center for Africa, that will incubate and promote the Kigali Initiative and seek its adoption by the African leaders and other relevant bodies;**
5. **Seek the support of the UN Sustainable Development Solutions Network and other ongoing networks on behalf of the Kigali Initiative, including the promotion of the Kigali Initiative within the United Nations and its agencies;**
6. **Mobilize African intellectuals, business leaders, and the diaspora to support the Kigali Initiative and to contribute to its success;**
7. **Prepare a Roadmap for Action with a potential for including a proposal for funding by the end of 2017 to be adopted by the network of Vice-Chancellors and to be presented to the leadership at the next meeting of the African Union in January 2018, as well as to other relevant bodies.**

Closing Statements by Representatives of Universities in Africa

Professor Labode Popoola
Vice Chancellor, Osun State University (Nigeria)

I recognize all participants. I am not a Minister, I am a forest economist. And sustainability comes naturally to the forester because the term was used for the first time in the 18th Century by German forester. We have been here for about two days now and countries on education generally and in particular tertiary education in Africa has not really been quite ennobling. We have identified the inadequate and in some cases lack of the needed attention from government, from the communities and even the knowledge workers – with the professors. Gladly, the SDG Center for Africa has now offered us a platform to fly. A platform to relaunch a renaissance, to rediscover ourselves in the area of quality and sustainable education. And I think it beholds all of us as academics to take advantage of this.

There is no doubt in the fact that the task ahead will be daunting but we should be undaunted. And so for me, I would like to say that universities and policy leaders should be in the driver's seat; we should take advantage of the moment and we should lead this forum of rediscovering. I would like to thank the organizers for the opportunity given to all of us to be part of this excellent program. *Thank you.*

Professor Mabel O. Imbuga
Vice Chancellor, Jomo Kenyatta University (Kenya)

We as Vice Chancellors support the SDG Center for Africa (SDGC/A) that is here in Rwanda and recommend that the SDGC/A Conference should be an annual event because we have really benefitted from it. We are ready as Vice Chancellors and are committed to being involved in the tracking and in the implementation of the SDGs, especially Rikejo – a Japanese word meaning women in science and engineering. At the same time we as Vice Chancellors will strive to offer quality relevant higher education and also come up with our own ranking system, to evaluate ourselves with our own criteria, practical to our own African continent, by Africans, for Africans, in Africa. At the same time we are committing to be Champions in the higher education transformation.

We are committing that we shall increase the employability of our graduates by implementing the triple helix that is working with our governments and the private sector especially in curriculum review and also commercialization of research outputs and the creation of business incubations. We shall also work with strategic development partners, especially like Japan International Cooperation Agency (JICA) and other philanthropists. We shall also take advantage of the synergies that are there between the SDGC/A and the Pan African Universities. In the ranking, we would like the universities that are working with communities and making a positive economic impact to be ranked the top-most. *Thank you to the conference organizers. Asante Sana and God bless you all.*

Dr. Mekasha Kassaye
Director, Office for Academic Standards and Quality Enhancement (OASQE), Addis Ababa University (Ethiopia)

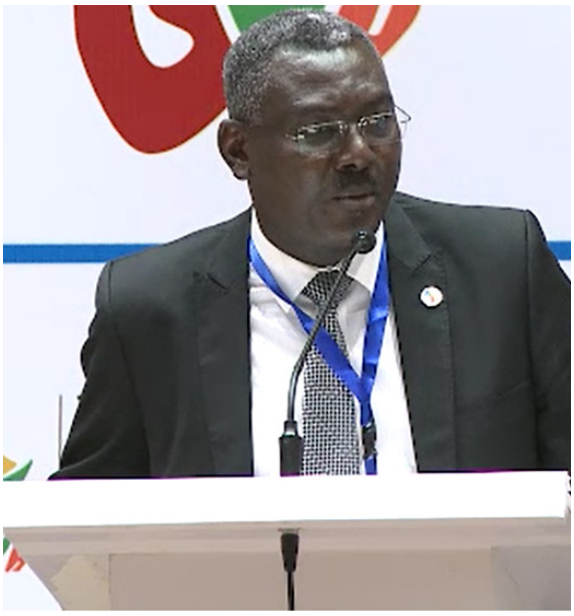
It is a pleasure for me to speak on behalf of Addis Ababa University to share my impression of the two-day conference. This was a very well organized conference were we have gained significant insights to ideas and the Government of the Republic of Rwanda and the SDGC/A should be acknowledged for this.

I would like to express my view regarding the research of higher education institutions in Africa. In order to meaningfully improve the quality of research in African higher education institutions and thereby improve the quality of life of African people, Africa needs to have specialized Centers of Excellence in research, especially in scientific research. It is in those Centers of Excellence that innovative research methods are tried out, best practices are shared and scaled up. Those Centers can also help as hubs for scientific information and technology incubation.

By way of this conference, and as this conference winds up, I would like to extend my call for all Member States of the African Union and the broad private sector to fund and continue funding the setting up of those Center of Excellence for Scientific Research. *Thank you.*

Closing Statements

by S.E. M. Abdoulkadri Tijani Idrissa
Minister for Professional Teaching and Technology for Niger



I would like to thank and encourage the SDG Center for Africa for convening this forum that was able to reunite the Members of Government from different countries and university leaders. I have realized throughout these last two days that there are very truthful ideas and solutions have been shared and I believe that by practicing these solutions, we will be able to make economic advancement.

I would like to address wars, demographic problems and diseases that we are facing; but at the end of this analysis. It is clear that what we have to do and the act of strategy that we should follow is to invest in quality education in order to improve our society. Over the last couple of days, this forum has discussed tertiary education and I am also convinced that it is clear the education system needs to become competitive.

We need to make sure that the quality students that we make are able to find employment.

Yesterday, one of the Professor Jeffery D. Sachs spoke about how other parts of the world have managed to develop themselves; he spoke of Europe that took centuries, he spoke of America and how Asia was able to develop in a short amount of time. I would like to give the example of Rwanda, a country that has completely transformed itself in twenty years. This is a great example. We cannot change Africa if we do not have a strong and orderly political system; we need a leader who engages himself if the growth of his people.

I would therefore like to commend the President of the Republic of Rwanda who was here yesterday and took the time to be with us here and share on this forum. We need a strong clear and effective political system. If we do not know what the best choices are for us and the best strategies for us, I doubt we could change within a small period of time.

Last and not least, we need to put resources in the sectors that will transform our countries and improve our education system. I would like to thank the Government of Rwanda and the conference organizers for this opportunity and setting up this event. *God bless you and Thank you.*

Closing Statements

by S.E. M. Dr. Nabil Mohamed Ahmed
Minister for Higher Education and Research for Djibouti

I would like to thank the organizers of this conference for the quality of forum and receiving us in Rwanda. I would like to thank all of the people of Rwanda for their kindness in receiving us. Today I have seen in the presentation by Professor Paul Patrick Walsh, speaking about all of the constraints that have been mentioned by the conference participants and in the past, please allow me to draw comparison between these constraints and challenges and the solution.

Firstly, hope in the future – because we have a very negative way of seeing our future in Africa, the first one is hope.

After the colonialization, today we have universities, we have intellectuals, we have professors, we have students, we have diaspora; we have all the ingredients to succeed and to make sure that we will achieve our objective in the future if there is a will. The second point is vision and willing.

The vision and commitment of our leaders, really I would like to congratulate President Paul Kagame because he has demonstrated to us yesterday by being with us that today our leaders are committing themselves to go hand in hand with Ministers, professors, universities and students to succeed in the future.

I would like also to mention the third point, globalization and new technologies help us to make knowledge available everywhere and at the same time I often say that students in Rwanda, Djibouti, Ethiopia and elsewhere in Africa are communicating with the same languages and using the same tools that students in Harvard University and Columbia University are using. So if we have lost our industrial revolution, we have to succeed in the digital revolution and we have the capacity to do it.

So what has to be done now? Someone said yesterday that we have to make a revolution. Today, we do not have the means or the capacity to make a revolution, because a revolution means that we have to change our way of doing and thinking; therefore we have to reform and then transform gradually to succeed. I think that universities everywhere in the world have seen that there is a disruption in the world and in the way that the world has evolved – particularly, the need of industries and the need of people. This is why we have said today that our way of teaching is not relevant or in time with what how we are living today. Dealing with quality, we have said that we have to create Centers of Excellence, but we have not found each country of Africa doesn't need to have its own Center of Excellence. For example, in Djibouti a Center of Excellence can be created for logistics and transport, in Ethiopia a Center of Excellence in agriculture, in Rwanda a Center of Excellence for services – and allowing students to go to these centers and gain certificates and diplomas in each field. This method would ensure that we will be confident in our universities and in our Centers of Excellence.

We have to also to strengthen our universities as well as build these Centers. In terms of research, opportunities that are offer solutions to climate change are very important in our countries – how can we be innovative in order to respond to this need of our countries? We have to work hand in hand with Western countries in order to ensure the transfer of technology and at the same time offer something that we can be sure we can master this technology and move forward. Platform of research, Djibouti has in less than one year created a platform for research in resilience and innovation. Please join this platform – for the moment Ethiopia has joined Djibouti and some West African countries like Senegal, but I would really appreciate if other East African countries can join us in this platform of thinking and in this network.

Our universities have different levels of success and quality, so can we help each other through learning and sharing this success and quality. We have spoken about economy, energy, quality, research, we must put all this together and make something good with prioritizing our needs. We have to work for a strong African economy that can support these challenges and universities have to work towards this. I would like request that we continue to offer scholarships to other partner universities, and Djibouti has already offered to Rwanda 12 scholarships to students who went to France and have been supported after completing their Masters course.

This is the kind of help that we need to provide. I would like to support the Kigali Initiative that has been initiated today and to think with you how we can call for action to succeed in the future. *Thank you.*

Closing Statements

by Honorable Professor Kwesi Yankah
Minister of State, Tertiary Education for Ghana

I would like to address the irony of me standing here in my current capacity, as the last major international conference that I attended which was just four months ago. I stood on a podium of that international conference on education, in my capacity as a Vice Chancellor of a Private University then. Four years before that, I stood on respective academic platforms of such stature as Pro-Vice Chancellor of Ghana's premiere university which I had been for close to six years or so.

Previously as very critical of policy makers in education within Ghana, Africa and elsewhere, here I stand as a policy maker myself. I do not think that policy makers and university administrators are at not related as they are all working towards raising the standards and quality within education.

On behalf of the Government of the Republic of Ghana, it has been a great joy and a privilege to be part of this international forum on Sustainable Development Goals. An initiative taken on by Rwanda to create this Center towards rallying support of the SDGs is highly commendable. It is essential to note that the President of the Republic of Ghana is a member of the SDGC/A Board, being the newest member of the board, this makes it even more compelling for us in Ghana to play a pivotal role in implementing programs and policies towards realizing the SDGs.

The Government of Ghana will therefore put its full weight behind the SDG Goals and take local initiatives in *Mobilizing African Intellectuals Towards Quality Tertiary Education*.

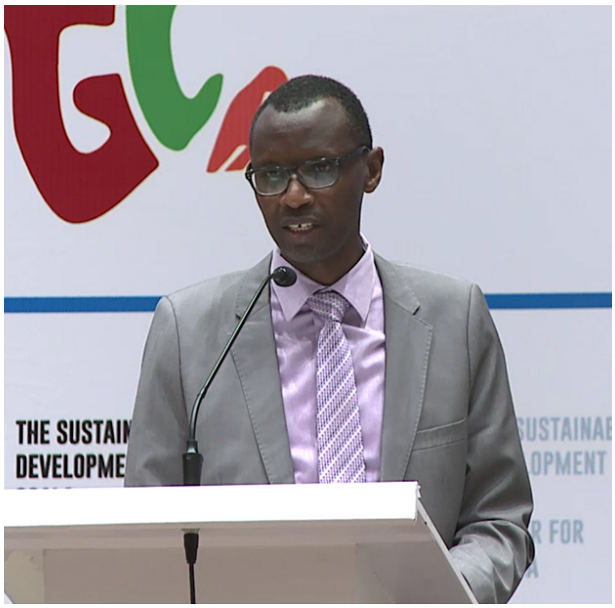
To this end we take a que from President Paul Kagame's proposal for a three-way partnership between the private sector, governments and universities in championing the realization of the SDGs. We applaud the Kigali Initiative and applaud the call for action. The Government of Ghana has first sought to improve access to tertiary education by first redefining basic education to include high school education. This way we add considerable value to the minimal level of education to be obtained by all children. This will also put us in a position to anticipate high enrollment ratios within the tertiary sector.

The free SHS policy that Adadankra has introduced with effect from this September should also release energies and boost the quality of technical and vocational training among the youth. But the government has also sought to strengthen the private sector in education to enable it to play a pivotal role in research and innovation. It has opened doors for private universities to access an educational fund otherwise exclusively accessed by public universities.

It has sought to remove taxes that were previously slapped on private universities in the hopes of creating a level playing field for the private sector to drive research and innovation to reduce unemployment. Finally, I would like to take this opportunity to address the Government of Rwanda and the people of Rwanda and participants at this conference. I would like to assure you all that the government and people of Ghana will ensure to sustain the momentum that you have built at this forum. *Thank you.*

Closing Remarks

by Honorable Dr. Musafiri Papias Malimba
Minister of Education for Rwanda



It is my great pleasure and honor to address you all at the official closing of this two day conference on: *Mobilizing African Intellectuals Towards Quality Tertiary Education* which was organized by The Sustainable Development Goals Centre For Africa (SDGC/A), and brought together around 300 intellectuals from 30 countries, including 25 African countries and 5 countries outside Africa.

As we are all aware, the overall goal of this conference was to kick-off discussions to explore solutions and build consensus on practical actions that can be undertaken right away to address pertinent issues of under-performing higher education system throughout the continent.

It was clearly stated during the key note address and opening session of this conference that Africa's achievement of access to education is to be recognized and acknowledged but this is not enough to sustain our dignity as human beings. The need for quality of education in general and higher education for the development of our countries and the region in the attainment of the SDGs and the African Union's Agenda 2063 cannot be overemphasized.

Unprecedented levels of social demand for quality education have arisen from the expansion of primary and secondary education, in part resulting from the Education for All (EFA) movement. In a growing number of countries, including Rwanda, lower secondary education has become part of a compulsory basic education cycle, and thus the pressure on access to upper secondary education is mounting. This upsurge in student enrolment has burdened the higher education system, making it difficult to keep up with global standards of education that can have a catastrophic impact on the African and world economy. This can be attributed to the inadequate funding, which is often provided by central governments with minimal support from the private sector. The role of government as the main source of funding has undermined the value of educators' intellectual property, viewing their contribution as civil service that is government compliant.

It was rightly put during discussions throughout the conference, the academic research for policy information and policy influence will not make African Universities "change-makers" on its own as the investment in higher education sub-sector is always considered along with other pressing development priorities. Hence, there is an urgent need to engage in triple helix partnerships between government, private sector and academia, and find innovative ways to invest in and deliver quality tertiary education, to ensure sustainable transformation of our continent and hence, achieving the sustainable development goals. This will be one of the major contributing factors in transforming our universities into recognized and reputable institutions at global level.

Considering the growing rates of youth and un-employment rates on the Africa's economy, there is equally a pressing need to heavily invest in entrepreneurship, innovation and the technical and vocational education and training (TVET) to produce middle-career technicians with adequate hands-on skills to meet the market demand and job creation.

Much as the investment in research and development is important to transform the Africa's economy, just as the emerging economies such as China, South Korea and Brazil did, it equally, or even more important to recognized the importance of Information Technology (IT) and the need to heavily invest in this sector as we need to fast-track the delivery of quality education in general and tertiary education in particular. During deliberations at this conference, it was noted that, once wisely and appropriated invested in, information technology of the current era can make a tremendous role in leap-flogging the quality of tertiary education through partnerships with well-established universities and having access to free or less costly libraries, professors via virtual classrooms, internet-based laboratories etc.

Particularly for Rwanda, with our top leadership belief in science and technology for sustainable transformation, and taking into consideration the global rapid digital change, the government of Rwanda decided to heavily invest in ICT infrastructure including availing the broadband across the countries and provisions ease access to digital devices among others to achieve policy actions in all sectors of the economy including education, health, agriculture etc.

Moreover, the Government of Rwanda decided to engage and invest in the regional and international partnership approaches to ensure economies of scale and to bring in best practices that exist elsewhere in the world. This resulted in physically bringing to Rwanda the reputable universities and research institutions such as the Carnegie Mellon University, the East Africa institute for fundamental research, a partner institute of the international Centre for theoretical physics (ICTP), a UNESCO category 2 institution, the African Institute for Mathematical Sciences (AIMS) and many more stem centers of excellences.

It is worth noting that, the benefit of the above mentioned partnerships will not be enjoyed by Rwanda only but Africa as whole. The success of these partnerships and many more to come will be a result of close collaboration among African countries, government, private sector and academia.

I seize this opportunity to commend the efforts and commitment put in place by some African countries which have in the World Bank African Centers of Excellence project with the aim to

train at the highest level a new generation of Africans who can develop and apply science and technology to solve Africa's most pressing challenges, as well as the Partnership for Skills in Applied Sciences, Engineering and Technology (PASET) with the objective to strengthen Applied Science, Engineering and Technology (ASET) contribution to socio-economic transformation in sub-Saharan Africa (SSA), through massive quality PhD training in ASET programs.

As I conclude this remarks, I call upon each one's effort to jointly put in actions the resolutions of this important conference. Allow me to thank Honorable Ministers and Ministers of State who made this despite your busy schedules. I thank all the panelists for your wise and guidance in leading the discussions. I thank all the Vice Chancellors and other delegates for your active participation to various sessions of this conference. Last but not least, allow me to thank the SDGC/A for organizing this conference and everyone who played a role in making this event a success.

I hereby declare, this conference on: *Mobilizing African Intellectuals Towards Quality Tertiary Education*, officially closed. *I thank you for your attention.*

ANNEX I: PROGRAM

Wednesday, 5th July 2017
Master of Ceremonies: Ms. Crystal Rugege, Director of Business Strategy and Operations, Carnegie Mellon University- Africa

8:00 – 9:00am	Arrival of Participants and Invited Guests ***Refreshments served***
10:00 – 10:30	Arrival of VIPs
11:00 - 11:30	Welcoming Remarks
11:30	Arrival of Guest of Honor
11:30 – 11:45	Introductory Remarks Dr. Belay Begashaw, Director General, SDGC/A
11:45 – 12:00	Professor Jeffrey D. Sachs, Director, Sustainable Development Solutions Network
12:00 – 12:15	Dr. Abdalla Hamdok, Executive Secretary (a.i), United Nations Economic Commission for Africa (ECA)
12:15	**His Excellency Paul Kagame,** **President of the Republic of Rwanda**
12:30 - 12:35	Photo Session
12:40 – 14:00	**High Level Panel Discussion on Quality Tertiary Education in the Era of SDGs and Agenda 2063**
Moderator:	Mr. Bonney Tunya, Presenter, CNBC Africa

Panelists:

- Honorable Dr. Musafiri Papias Malimba,
- Minister of Education, Rwanda
- Professor Jeffrey D. Sachs, Director,
- Sustainable Development Solutions Network
- Dr. Fred Swaniker, Chief Executive Officer and Founder,
- African Leadership Academy and the African Leadership
- Network
- Dr Max Price, Vice Chancellor, University of Cape Town
- Mr. Hiroshi Kato, Senior Vice President, JICA

14:00 – 15:00	Lunch Break
15:00 – 17:00	**Parallel Thematic Group Discussions**
Session 1:	**The Enabling Environment in Education - Excellence in Teaching and Learning**
Chair:	Professor Abel Idowu Olayinka, Vice-Chancellor, University Of Ibadan, Nigeria
Presenter:	Professor Mabel Opanda Imbuga, Vice Chancellor, Jomo Kenyatta University Of Agriculture And Technology, Kenya

ANNEX I: PROGRAM

Session 2: Research - Scholarly Works

Chair: Professor Christian Happi, Department of Biological Sciences and Director, African Center of Excellence for Genomics of Infectious Disease (ACEGID), Redeemer's University, Nigeria

Presenter: Professor Elias Ayuk, Director, United Nations University Institute for Natural Resources in Africa (UNU-IRA), Ghana

Session 3: Building Reputable University Systems in Africa

Chair: Dr. Fred Swaniker, Chief Executive Officer and Founder, African Leadership Academy and the African Leadership Network, South Africa

Presenter: Professor Patrick Paul Walsh, Professor of International Development Studies, University College Dublin, Ireland

Session 4: Knowledge for Development – Transforming Societies

Chair: Professor Diran Makinde, Senior Advisor, NEPAD Industrialization, Science, Technology and Innovation Hub (NISTIH), South Africa

Presenter: Professor Labode Popoola, Vice Chancellor, Osun State University, Nigeria

19:00 – 21:00 Dinner

Hosted by Honorable Dr. Musafiri Papias Malimba, Minister of Education, Rwanda

Master of Ceremonies: Dr. Marie Christine Gasingirwa, Director General of Science and Technology, Ministry of Education, Rwanda

ANNEX I: PROGRAM

Thursday, 6th July 2017

Master of Ceremonies: Dr. Michael Tusiime, Lecturer, Department of Foundation, Management and Curriculum Studies, University of Rwanda

8:30 – 9:00am Arrival of participants
Refreshments served

9:00 – 11:30 **Findings of the Parallel Thematic Group Discussions**

Introduction: Professor Nelson Ijumba, Deputy Vice Chancellor of Academic Affairs and Research, University of Rwanda

- Professor Abel Idowu Olayinka, Vice-Chancellor, University Of Ibadan
- Professor Christian Happi, Department of Biological Sciences and Director, African Center of Excellence for Genomics of Infectious Disease (ACEGID), Redeemer's University
- Dr. Fred Swaniker, Chief Executive Officer and Founder, African Leadership Academy and the African Leadership Network
- Professor Diran Makinde, Senior Advisor, NEPAD Industrialization, Science, Technology and Innovation Hub (NISTIH)

11:30 - 13:30 Lunch Break

13:30 - 15:00 The Way Forward Discussions

Chair: Dr. Donald Kaberuka, Leadership Council Member, Center for Public Leadership, Harvard Kennedy School

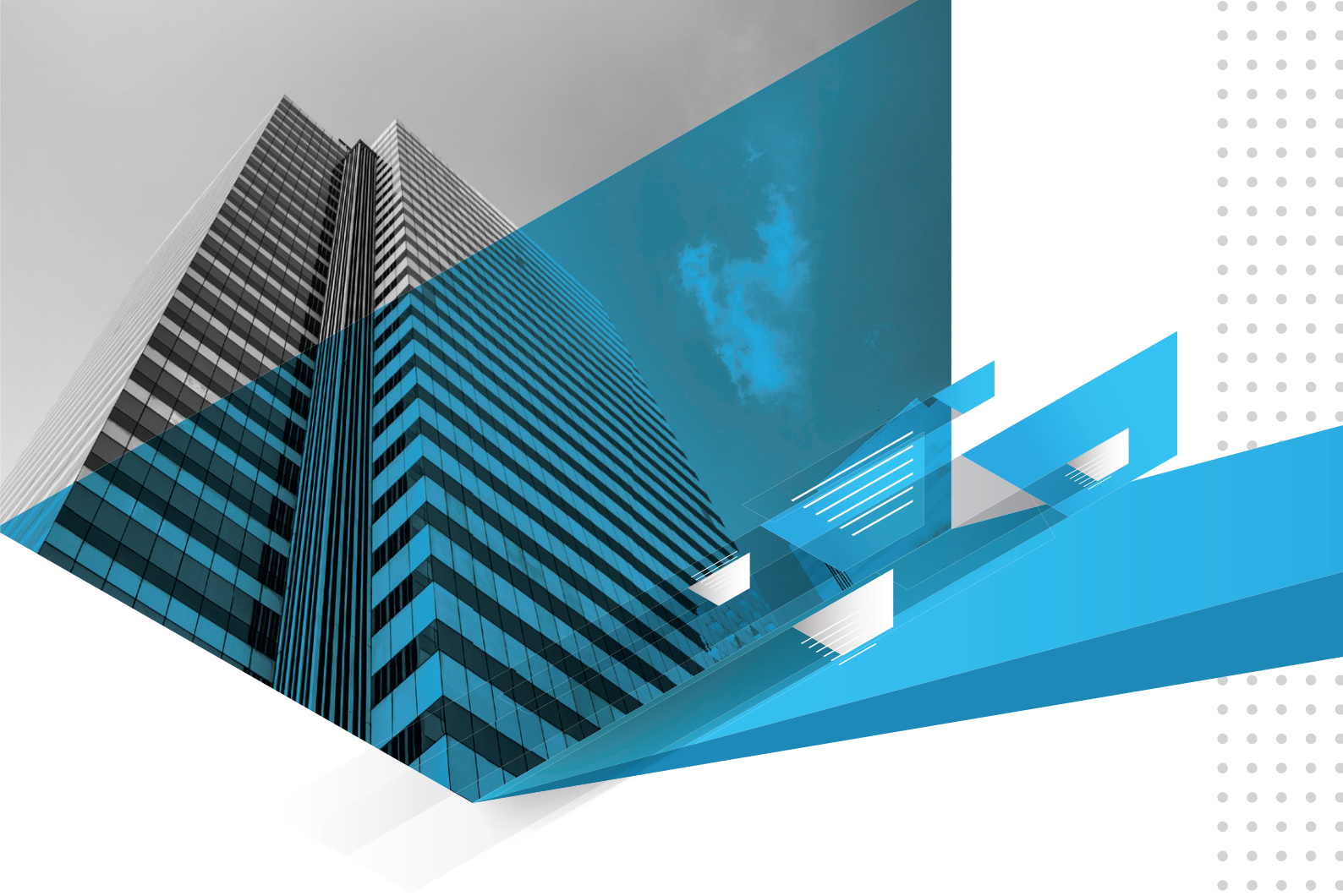
- Professor Jeffrey D. Sachs, Director, Sustainable Development Solutions Network and the Earth Institute
- Professor Mamokgethi Phakeng, Deputy Vice-Chancellor for Research and Internationalisation, University of Cape Town
- Mr. Thierry Zomahoun, President and Chief Executive Officer, African Institute for Mathematical Sciences (AIMS)
- Professor Abel Idowu Olayinka, Vice Chancellor, University of Ibadan
- Professor Alexandre Lyambabaje, Executive Secretary, Inter-University Council for East Africa

ANNEX I: PROGRAM

15:00 – 15:30 **Q&A and Discussions**
Refreshments served

15:30 – 16:00 **Closing Ceremony**

- Professor Labode Popoola, Vice Chancellor, Osun State University (Nigeria)
- Professor Mabel O. Imbuga, Vice Chancellor, Jomo Kenyatta University (Kenya)
- Dr. Mekasha Kassaye, Director, Office for Academic Standards and Quality Enhancement (OASQE), Addis Ababa University (Ethiopia)
- Dr. Belay Begashaw, Director General, SDGC/A
- S.E. M. Abdoulkadri Tijani Idrissa, Minister for Professional Teaching and Technology, Niger
- S.E. M. Dr. Nabil Mohamed Ahmed, Minister for Higher Education and Research, Djibouti
- Honorable Professor Kwesi Yankah, Minister of State, Tertiary Education, Ghana
- Honorable Dr. Musafiri Papias Malimba, Minister of Education, Rwanda



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